

PTO/SB/21 (09-04)

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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission 37

Application Number 09/591,584

Filing Date 06/09/2000

First Named Inventor Peter T. Dietz

Art Unit 1771

Examiner Name H. Vo

Attorney Docket Number 55434US002

**ENCLOSURES (Check all that apply)**

<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input checked="" type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	Return Receipt Postcard
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<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	Remarks	

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name	Stevens & Showalter LLP		
Signature			
Printed name	Robert L. Showalter		
Date	November 22, 2005	Reg. No.	33,579

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Robert L. Showalter	Date	November 22, 2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/17 (12-04v2)

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# FEE TRANSMITTAL

## For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 500

**Complete if Known**

Application Number	09/591,584
Filing Date	06/09/2000
First Named Inventor	Peter T. Dietz
Examiner Name	H. Vo
Art Unit	1771
Attorney Docket No.	55434US002

**METHOD OF PAYMENT** (check all that apply)☒ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_☐ Deposit Account Deposit Account Number: \_\_\_\_\_ Deposit Account Name: \_\_\_\_\_

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below☐ Charge fee(s) indicated below, **except for the filing fee**☐ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17☐ Credit any overpayments**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES****Fee Description**

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

<b>Total Claims</b>	<b>Extra Claims</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>
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- 20 or HP = \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_

HP = highest number of total claims paid for, if greater than 20.

<b>Indep. Claims</b>	<b>Extra Claims</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>
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- 3 or HP = \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_

HP = highest number of independent claims paid for, if greater than 3.

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

<b>Total Sheets</b>	<b>Extra Sheets</b>	<b>Number of each additional 50 or fraction thereof</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>
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- 100 = \_\_\_\_\_ / 50 = \_\_\_\_\_ (round up to a whole number) x \_\_\_\_\_ = \_\_\_\_\_

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Filing a brief in support of an appeal

**Fees Paid (\$)**

500

**SUBMITTED BY**

Signature

Registration No.  
(Attorney/Agent) 33,579

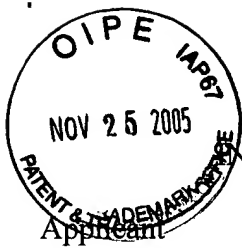
Telephone 937/438-6848

Name (Print/Type) Robert L. Showalter

Date November 22, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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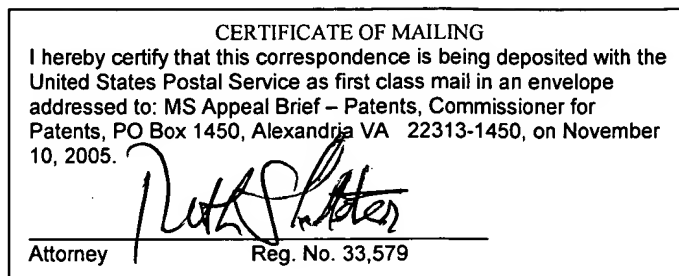
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*Ifw*

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Peter T. Dietz  
Serial No. : 09/591,584  
Filed : June 9, 2000  
Title : Glazing Element and Laminate for Use in the Same  
Attorney Docket : 55434US002  
Examiner : H. Vo  
Art Unit : 1771

Mail Stop Appeal Brief--Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:



APPEAL BRIEF

1. *Real Party in Interest*

The Real Party in Interest in the present Appeal is 3M Innovative Properties Company, the assignee, as evidenced by the assignment set forth at Reel 10886, Frame 267-68.

2. *Related Appeals and Interferences*

A first appeal (Appeal No. 2005-0244) to the U.S. Patent and Trademark Office Board of Patent Appeals and Interferences for this patent application was mailed on January 28, 2005. A copy of the decision can be found in Appendix II.

3. *Status of the Claims*

Claims 1-15, 17-22, 31-33, 35 and 38-41 stand finally rejected as noted in the final Office Action dated June 22, 2005. Claims 16, 23, 30, 36 and 37 stand objected to as being dependent upon a rejected base claim, but as otherwise being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 24-27, 34 and 40 stand allowed. Claims 28 and 29 have been canceled.

4. *Status of Amendments*

No formal amendments to the claims have been filed subsequent to the June 22, 2005 Final Rejection.

A telephonic interview was conducted between Examiner Vo and applicant's representative Robert L. Showalter on August 16, 2005, the substance of which is discussed in applicant's paper entitled "Response to Interview Summary Forms" dated September 15, 2005.

A telephonic interview was conducted between SPE Terrel Morris and applicant's representative Robert L. Showalter on September 1, 2005. During that interview, claim 1 set out in applicant's May 23, 2005 response as well as the prior art applied against claim 1 were discussed. No agreement was reached regarding claim 1.

A telephonic interview was conducted between Examiner Vo and applicant's representative Robert L. Showalter on September 26, 2005. During that interview, Mr. Showalter proposed amending at least claim 1 to recite in the last two lines of that claim that "the laminate exhibits a visible light transmission of 10% or more." Mr. Showalter indicated that support for the proposed amendment could be found in columns 13 and 14 of U.S. Patent No. 6,797,396, which patent is incorporated by reference into the subject application on page 8, line 25. During a telephone conversation between Mr. Showalter and Examiner Vo on October 5, 2005, Examiner Vo indicated that the proposed amendment to claim 1 would constitute new matter. Mr. Showalter further proposed to Examiner Vo amending at least claim 1 to recite in the last two lines of that claim that "a layer of the laminate exhibits a visible light transmission of 10% to 90%." On October 6, 2005, Examiner Vo indicated that this proposed amendment would also constitute new matter. Hence, no agreement was reached regarding claim 1.

##### *5. Summary of the Claimed Subject Matter*

The invention is directed to a laminate attached to window glass to provide a vehicular or architectural glazing element which has reduced spall and lacerative consequences<sup>1</sup> on impact

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<sup>1</sup> It is generally conventional to utilize single paned glazing elements for fabricating some automobile windows such as vehicle door windows and body side windows. While such windows are typically tempered so that on impact they fracture in small irregular pieces without producing knife-like shards, they still provide a hazard to the occupants of a motor vehicle. The impact fracture of such automotive glazing typically produces what is called "spall." Spall is the shower of glass splinters that typically results from the impact fracturing of automotive glazing. Such glass splinters could have a lacerative effect on the occupants of the motor vehicle and on any air bag that may have been inflated as a result of an automobile accident.

fracture of the window glass. The laminate can be easily installed under ambient conditions with an inexpensive roller and, once installed, provides superior anti-spall and anti-lacerative properties.

A concise explanation of elements recited in independent claims 1, 9 and 12 are set out in parentheses below.

**Claim 1**

A laminate attached to window glass suitable for use in a vehicular or architectural glazing element which has reduced spall and lacerative consequences on impact fracture of the window glass; said laminate comprising:

(a) a first lamina (e.g., see plastic film 13 in Fig. 1, see page 5, line 16 and page 8, lines 1-16; plastic film 22 in Fig. 2, see page 5, line 25) comprised of visible light transmissive flexible nonadhesive polymeric material having a first major surface and an opposite second major surface;

(b) a scratch-resistant layer (e.g., see hard coat 12 in Fig. 1, see page 6, line 1 through page 7, line 1; hard coat layer 21 in Fig. 2, see page 5, line 25) over said first major surface to provide an exposed surface to the laminate;

(c) at least one additional lamina (e.g., see plastic film 15 in Fig. 1, see page 5, line 16; plastic films 24, 26 in Fig. 2, see page 5, lines 26-27) comprised of visible light transmissive flexible nonadhesive polymeric material;

(d) a sufficient number of layers (e.g., see adhesive layer 14 in Fig. 1, see page 5, line 17 and page 9, line 22 through page 10, line 24; adhesive layers 23, 25 in Fig. 2, see page 5, lines 26, 27) of in situ visible light transmissive pressure sensitive adhesive layers to bond said laminae together with the scratch-resistant layer exposed; and

(e) a layer of in situ visible light transmissive ambient temperature attachable pressure sensitive adhesive (e.g., see pressure sensitive adhesive 16 in Fig. 1, page 5, line 18; pressure sensitive adhesive 27 in Fig. 2, see page 5, line 28) to bond said laminate to window glass (e.g., see glass sheet 17 in Fig. 1, see page 5, line 29), wherein the total thickness of the laminate exceeds about 5 mils (see page 4, line 28) and the laminate exhibits a light transmittance.

**Claim 9**

A vehicular or architectural glazing element which has reduced spall and lacerative consequences on impact fracture, said glazing element comprising:

- (a) a laminate comprising a first lamina (e.g., see plastic film 13 in Fig. 1, see page 5, line 16 and page 8, lines 1-16; plastic film 22 in Fig. 2, see page 5, line 25) comprised of visible light transmissive flexible polymeric material having a first major surface and an opposite second major surface; a scratch-resistant layer (e.g., see hard coat 12 in Fig. 1, see page 6, line 1 through page 7, line 1; hard coat layer 21 in Fig. 2, see page 5, line 25) over said first major surface; at least one additional lamina (e.g., see plastic film 15 in Fig. 1, see page 5, line 16; plastic films 24, 26 in Fig. 2, see page 5, lines 26, 27) comprised of visible light transmissive flexible nonadhesive polymeric material; a sufficient number of layers of in situ visible light transmissive pressure sensitive adhesive layers (e.g., see adhesive layer 14 in Fig. 1, see page 5, line 17; adhesive layers 23, 25 in Fig. 2, see page 5, lines 26, 27) to bond said laminae together with the scratch-resistant layer exposed; a layer of in situ visible light transmissive ambient temperature attachable pressure sensitive adhesive (e.g., see pressure sensitive adhesive 16 in Fig. 1, page 5, line 18; pressure sensitive adhesive 27 in Fig. 2, see page 5, line 28) to bond said laminate to window glass (e.g., see glass sheet 17 in Fig. 1, see page 5, line 29); wherein the total thickness of the laminate exceeds about 5 mils (see page 4, line 28) and the laminate exhibits a light transmittance; and
- (b) window glass (e.g., see glass sheet 17 in Fig. 1, see page 5, line 29).

**Claim 12**

12. A laminate attached to window glass suitable for use in a vehicular or architectural glazing element comprising the following components adhered together in the following order:

- (a) a scratch-resistant layer comprised of cured ceramer (e.g., see hard coat layer 21 in Fig. 2, see page 6, line 1 through page 7, line 30);
- (b) a first biaxially oriented polyester film (e.g., see plastic film 22 in Fig. 2, see page 5, line 25 and page 8, lines 1-16) having a thickness of not more than 5 mils (0.13 mm);
- (c) a first pressure sensitive adhesive layer (e.g., see adhesive layer 23 in Fig. 2, see page 5, line 26);

(d) a second biaxially oriented polyester film having a thickness of not more than 5 mils (0.13 mm) (e.g., see plastic film 24 in Fig. 2, see page 5, line 26);

(e) a second pressure sensitive adhesive layer (e.g., see adhesive layer 25 in Fig. 2, see page 5, line 27);

(f) a third biaxially oriented polyester film having a thickness of not more than 5 mils (0.13 mm) (e.g., see plastic film 26 in Fig. 2, see page 5, line 27); and

(g) a third ambient-temperature-attachable pressure sensitive adhesive layer (e.g., see adhesive layer 27 in Fig. 2, see page 5, line 28); wherein said pressure sensitive adhesive layers are comprised of pressure sensitive adhesive having a shear storage modulus measured at 22°C in the range of about 0.20 MPa to 0.50 MPa (see page 10, lines 1-13).

6. *Grounds of Rejection to be Reviewed on Appeal*

1. Whether claims 1-5, 7-9, 11, 13, 17-21, 31-33, 38, 39, 40 and 41 are unpatentable under 35 U.S.C. § 103(a) based upon U.S. Patent No. 5,118,540 to Hutchison in view of U.S. Patent No. 4,157,417 to Murphy.

2. Whether claim 10 is unpatentable under 35 U.S.C. § 103(a) based on the '540 patent and the '417 patent in view of U.S. Patent No. 6,033,785 to Tanaka et al.

3. Whether claim 6 is unpatentable under 35 U.S.C. § 103(a) based on the '540 patent and the '417 patent in view of U.S. Patent No. 5,677,050 to Bilkadi et al.

4. Whether claim 12 is unpatentable under 35 U.S.C. § 103(a) based on the '540 patent and the '417 patent in view of U.S. Patent No. 5,677,050 to Bilkadi et al.

5. Whether claims 14, 15, 22 and 35 are unpatentable under 35 U.S.C. § 103(a) based on the '540 patent and the '417 patent in view of U.S. Patent No. 6,013,722 to Yang et al.

7. *Argument*

Claims 1-5, 7-9, 11, 13, 17-21, 31-33, 38, 39, 40 and 41 stand rejected under § 103(a) as being unpatentable over U.S. Patent No. 5,118,540 to Hutchison in view of U.S. Patent No. 4,157,417 to Murphy; claim 10 stands rejected under § 103(a) as being unpatentable over the '540 patent and the '417 patent in view of U.S. Patent No. 6,033,785 to Tanaka et al.; claim 6

stands rejected under § 103 as being unpatentable over the '540 patent and the '417 patent in view of U.S. Patent No. 5,677,050 to Bilkadi et al; claim 12 stands rejected under § 103 as being unpatentable over the '540 patent and the '417 patent in view of U.S. Patent No. 5,677,050 to Bilkadi et al; and claims 14, 15, 22 and 35 stand rejected under § 103(a) as being unpatentable over the '540 patent and the '417 patent in view of U.S. Patent No. 6,013,722 to Yang et al. Claims 16, 23, 24-27, 30, 34, 36, 37 and 40 recite allowable subject matter.

HUTCHISON AND MURPHY AND

CLAIMS 1-5, 7-9, 11, 13, 17-21, 31-33, 38, 39, 40 AND 41

The June 22, 2005 Final Office Action refers to the June 17, 2004 Examiner's Answer for a statement of the grounds for rejection of claims 1-5, 7-9, 11, 13, 17-21, 31-33, 38, 39, 40 and 41.

Nowhere within the four corners of the Hutchison patent is "a glass substrate" disclosed, taught or suggested. Nor does Hutchison disclose, teach or suggest a "window glass suitable for use in a vehicular or architectural glazing element," as recited in claim 1, or a "window glass" in a "vehicular or architectural glazing element," as required by claim 9. Instead, Hutchison teaches a reflective film 100 in combination with a reflector element to form a parabolic trough solar energy concentrator, see column 7, lines 9-12. Hutchison further teaches that the "reflector element 210 may comprise support structure 212, which may be either solid or framework, holding a surface 214 configured in a trough like shape," see column 7, lines 20-23. The Hutchinson '540 patent also teaches "the flexible reflective film may be incorporated into other types of lighting reflectors and solar energy applications, e.g., parabolic solar dish and heliostat applications," see column 7, lines 41-44. However, nowhere does Hutchison disclose, teach or suggest using his film in combination with window glass for use in a vehicular or architectural glazing element. To use window glass to support the Hutchison film would be completely contrary to the entire focus of the Hutchison invention, i.e., to reflect "solar radiation impinging on any part of the surface of the flexible reflective film 100," see column 7, lines 24-27 of the '540 patent.

It is noted that on page 5 of the January 28, 2005 Decision on Appeal, the Board stated the "disclosure of 'support structure' may be considered as generic to window glass \*\*\*."



Subsequent to the first Appeal, applicant has amended independent claims 1 and 9 to recite that the window glass is suitable for use in or comprises part of a vehicular or architectural glazing element, please see the Amendment filed on May 23, 2005. Clearly, Hutchison does not disclose, teach or suggest to one skilled in the art that his support structure 212 comprises window glass capable of being used in or comprising part of a vehicular or architectural glazing element. Hutchison does teach providing a support structure 212 to which his reflective film 100 is secured so that solar radiation is reflected by the film 100 to “converge at the line of focus of \*\*\* [a] parabolic surface,” see column 7, lines 20-27. Because the solar radiation is not intended to pass through the Hutchison support structure, there is no need for a window glass support structure suitable for use in or comprising part of a vehicular or architectural glazing element.

The final Office Action dated June 22, 2005 states on page 5:

Applicant argues that Murphy fails to teach the window glass suitable for use in vehicular or architectural glazing element. It is recognized that “suitable for use in vehicular or architectural glazing element” is an intended use limitation. It has been held that a recitation with respect to the manner in which a claimed window glass is intended to be employed does not differentiate the claimed window glass from a prior window glass satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

The Ex parte Masham case involves the issue of anticipation. There, the Board of Patent Appeals and Interferences held that a claimed apparatus was anticipated because it did not “undergo a metamorphosis to a new apparatus merely by affixing instructions thereto” that it be completely submerged, which the prior art device was also capable of. Ex parte Masham, 2 USPQ2d 1647, 1648 (Bd. Pat. App. & Int. 1987). In the present application, no claim has been rejected as being anticipated by either the Hutchison or the Murphy patent. Rather, all claims involved in this appeal stand rejected as being obvious in view of a combination of at least the Hutchison and Murphy patents. Hence, the issue here is whether one skilled in the art would have been motivated to use the Hutchison film in combination with the Murphy glass to make a vehicular or architectural glazing element, and not whether a single reference teaches an

apparatus meeting all of the structural limitations of a claim and being capable of performing an intended use recited in the claim, as was the case in Ex parte Masham.

The June 17, 2004 Examiner's Answer states on page 4:

Hutchison teaches a layer of silver having a thickness of 1 to 1.5 microns. It is believed that the presence of the thin silver layer in the laminate does not necessarily cause the laminate [to be] completely non-transmissive to visible light but rather to reduce the visible light transmittance of the laminate. Since the claims are unspecific about the percentage of visible light transmission, Hutchison still reads on the claimed light transmittance.

Hutchison teaches the reflective film suitable for solar energy applications (abstract). Hutchison does not specifically disclose the reflective film attached to window glass. Murphy, however, teaches the reflective film having been attached to window glass to reduce heat, glare of solar radiation \*\*\*. This is important to the expectation of successfully practicing the invention of Hutchison and thus suggesting the modification. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the reflective film in combination with window glass motivated by the desire to reduce heat, glare of solar radiation.

Murphy discloses and teaches window glass that includes a transparent solar control sheet material that reflects solar energy but is substantially transparent to visible light. For example, Murphy discloses a film having "a marked reduction in transmission of ultraviolet rays, infrared light and reduction in glare while retaining good transparency to visible light," see column 5, lines 25-28. Hutchison discloses and teaches a film construction that reflects all or almost all of the visible light spectrum as well as ultraviolet and infrared light but fails to disclose, teach or suggest using any kind of window structure, let alone window glass suitable for use in or comprising part of a vehicular or architectural glazing element.

In particular, Hutchison teaches providing a reflective film for use in a solar energy concentrator 200, see column 7, lines 9 and 10, and "other types of lighting reflectors \*\*\*," see column 7, lines 41-45. Hutchison further teaches that "to be efficient[,], a reflective film must be highly specularly reflective to visible, ultraviolet, and/or near infra-red light between about 300-2,500 nanometers," see column 1, lines 19-22 of the Hutchison '540 patent. Hutchison also teaches in column 2, lines 15-18, "a thin layer of silver \*\*\* is characterized by the presence of a

spectral 'window' through which ultraviolet light in the 300-400 nanometer region readily passes." There is no mention made in Hutchison that a thin layer of silver is characterized by the presence of a spectral window through which visible light passes.

Hence, the Hutchison film functions to reflect visible light in addition to ultraviolet and near infra-red light while the Murphy film functions to transmit visible light while reducing ultraviolet rays, infrared light and glare.

Faced with these teachings, one skilled in the art would not have been motivated to use the reflective film construction of Hutchison on the window glass of Murphy, to produce a vehicular or architectural glazing element, because the Hutchison reflective film construction would not permit enough, if any, visible light through the window for the window to be useful in a vehicular or architectural application. For example, any vehicle that had its windows covered with the Hutchinson reflective film construction would be a danger to the occupants as well as the public at large, because the driver's ability to see through the windows would be significantly impaired. Therefore, it is submitted that there is no motivation or suggestion in either the '540 patent or the '417 patent to combine the teachings of Hutchison and Murphy to produce any of the articles recited in the present claims. Accordingly, it was improper to combine the teachings of these references to reject the present claims and the present claims should be allowed.

The June 17, 2004 Examiner's Answer also states on page 3:

Hutchison discloses a reflective film mounted on a substrate having a layer construction as follows, a protective fluorocarbon film, a first layer of pressure sensitive adhesive, a silver layer, a biaxially oriented polyethylene terephthalate (PET), a second layer of pressure sensitive adhesive, a biaxially oriented PET, a third layer of pressure sensitive adhesive and a glass substrate (example 5 and figures 3 and 6).

Example 5 in the Hutchison patent provides a 2 mil thick flexible fluorocarbon film (first layer) which may be co-extruded and biaxially oriented, see column 10, lines 10-15. A first layer of pressure sensitive adhesive is applied to the film. A silver layer is vapor-deposited onto the first adhesive layer. A second layer of pressure sensitive adhesive is applied to the silver layer. A second layer (1 mil thick) of fluorocarbon film is applied to the second layer of pressure

sensitive adhesive. Example 5 does not provide a protective fluorocarbon film in combination with two biaxially oriented PET layers, as set out on page 3 of the Examiner's Answer. It is noted that Example 6 in the Hutchison patent does provide two fluorocarbon film layers in combination with a co-extruded biaxially oriented flexible polyester film layer, see column 7, lines 50-59 and column 11, lines 8-15. However, Example 6 does not provide a protective fluorocarbon film in combination with two biaxially oriented PET films.

The January 28, 2005 Decision on Appeal further states on page 6:

“[W]e determine that the functions of these similar solar control films are not “diametrically opposed” but are very much alike. Hutchison teaches that “[t]o be efficient a reflective film must be highly specularly reflective to visible, ultraviolet, and/or near infrared light between about 300-2,500 nanometers” (col. 1, ll. 19-22). Although Hutchison teaches that some uv light will be transmitted by the thin layer of silver (col. 2, ll. 14-20), this reference also teaches that “[s]ilver reflects visible light better than aluminum” (col. 1, ll. 52-53). Therefore the teaching in Murphy that visible light is somewhat transmitted by the aluminum layer (col. 5, ll. 25-27) is not a “diametrically opposed function” but would have been suggested to one of ordinary skill in this art by the teachings of Hutchison. We note that Murphy teaches that the transmission of visible light, even with a thin aluminum layer, may be reduced by up to 90% (col. 1, ll. 44-49; note that other metals such as silver are taught by Murphy at col. 1, ll. 49-54).

Contrary to any suggestion by the Board's above noted conclusion, it is submitted that Murphy does not provide any disclosure, teaching or suggestion that would have motivated one of ordinary skill in this art to combine the teachings of Hutchison and Murphy, as proposed in the previous Office Action rejections.

Hutchison's reflective film is intended for use in a solar energy concentrator 200, see column 7, lines 9 and 10, and “other types of lighting reflectors \*\*\*,” see column 7, lines 41-45. As noted by the Board, Hutchison further teaches that “to be efficient[,] a reflective film must be highly specularly reflective to visible, ultraviolet, and/or near infra-red light between about 300-2,500 nanometers,” see column 1, lines 19-22 of the '540 Hutchison patent. Murphy, in contrast, discloses a film having “a marked reduction in transmission of ultraviolet rays, infrared light and reduction in glare while retaining good transparency to visible light,” see column 5, lines 25-28.

Hence, the Hutchison film functions to reflect visible light in addition to ultraviolet and near infra-red light while the Murphy film functions to transmit visible light while reflecting ultraviolet rays and infrared light and reducing glare. Thus, these two inventions (Hutchison's and Murphy's) do not exhibit functions that are consistent with one another. Consequently, one skilled in the art would not have been motivated to apply Hutchison's reflective film, which is highly reflective to visible, ultraviolet and infra-red light, to a glass window suitable for use in or comprising part of a vehicular or architectural glazing element in view of Murphy's teaching of applying a film having good transparency to visible light to a window glass. For these reasons as well as those discussed above, it is submitted that the teachings of Hutchison and Murphy were improperly combined in the rejection of the pending claims.

For the reasons set out above, the Board is respectfully requested to reverse the Examiner's final rejection of claims 1-5, 7-9, 11, 13, 17-21, 31-33, 38-41.

HUTCHISON, MURPHY AND BILKADI ET AL.

AND CLAIM 6

The Bilkadi et al. patent has been applied in combination with the Hutchison and Murphy patents in the rejection of claim 6. Bilkadi et al. teach a hard coating comprising a cured ceramer. While the Bilkadi et al. patent does disclose a retroreflective sheeting including a cured ceramer layer, nowhere does it suggest forming a laminate comprising at least two flexible nonadhesive polymeric material laminae and wherein the laminate has a thickness of at least about 5 mils, exhibits a light transmittance and is attached to window glass. Nor does the Bilkadi et al. patent provide any motivation or suggestion for combining the teachings of Hutchison and Murphy. Accordingly, the Board is respectfully requested to reverse the Examiner's final rejection of claim 6.

HUTCHISON, MURPHY AND BILKADI ET AL.

AND CLAIM 12

The June 22, 2005 Office Action states:

Hutchison discloses a laminate have a construction in a following order: surface of solar energy/adhesive/polyester/polyester/adhesive/silver/adhesive/polyester (example 7). Hutchison teaches the polyester layer of the laminate being protected with a premask film prior to installation and during installation. Hutchison discloses the use of an acrylic pressure sensitive adhesive to bond the silver layer and the polyester. Hutchison is silent as to a scratch-resistant ceramer coating. Bilkadi supplies the missing feature.

First, it is noted that a premask film is disclosed in Example 8 of the '540 patent and is applied to a fluorocarbon film, see column 12, lines 1-5. A similar rejection was previously successfully traversed by applicant in an Amendment After Final Rejection dated September 16, 2003. As asserted in that paper, there is no suggestion or motivation in either reference to replace a temporary polypropylene premask film, as disclosed by Hutchison, with a permanent, cured ceramer layer, as disclosed by Bilkadi et al. Nor does the Murphy patent provide any motivation or suggestion for combining the teachings of Hutchison and Bilkadi et al. Accordingly, the Board is respectfully requested to reverse the Examiner's final rejection of claim 12.

HUTCHISON, MURPHY AND TANAKA ET AL.

AND CLAIM 10

In the rejection of claim 10, Tanaka et al. was applied in combination with Hutchison and Murphy for providing a teaching of tempered glass. However, the Tanaka et al. patent does not correct for the deficiencies discussed above of combining Hutchison and Murphy. Accordingly, the Board is respectfully requested to reverse the Examiner's final rejection of claim 10.

HUTCHISON, MURPHY AND YANG ET AL.

AND CLAIMS 14, 15, 22 AND 35

Yang et al. has been applied in combination with Hutchison and Murphy with regard to claims 14, 15, 22 and 35. Yang et al. do not provide any motivation or suggestion for combining the teachings of Hutchison and Murphy in the manner espoused in the Office Action with regard to independent claims 1 and 9, from which claims 14, 15, 22 and 35 depend.

CLAIMS 15 AND 22


It is submitted that claims 15 and 22 recite additional limitations which further distinguish them patentably from the applied prior art. It is noted that a single layer of pressure sensitive adhesive is taught by Yang et al. for bonding a film to a glass slide, see column 7, lines 54-67. However, nowhere does Yang et al. disclose a laminate comprising a first polymeric material lamina bonded to at least one additional polymeric material lamina, wherein the laminate and a window glass have a percent haze less than or equal to about 2.0%.

Accordingly, the Board is respectfully requested to reverse the Examiner's final rejection of claims 14, 15, 22 and 35.

CONCLUSION

It is submitted that claims 1-15, 17-22, 31-33, 35 and 38-41 define patentably over the applied prior art. Accordingly, it is respectfully requested that the Board reverse the Examiner's final rejection of claims 1-15, 17-22, 31-33, 35 and 38-41.

Respectfully submitted,  
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8. *Appendix I – The Claims on Appeal*

1. (Previously Presented) A laminate attached to window glass suitable for use in a vehicular or architectural glazing element which has reduced spall and lacerative consequences on impact fracture of the window glass; said laminate comprising:

- (a) a first lamina comprised of visible light transmissive flexible nonadhesive polymeric material having a first major surface and an opposite second major surface;
- (b) a scratch-resistant layer over said first major surface to provide an exposed surface to the laminate;
- (c) at least one additional lamina comprised of visible light transmissive flexible nonadhesive polymeric material;
- (d) a sufficient number of layers of in situ visible light transmissive pressure sensitive adhesive layers to bond said laminae together with the scratch-resistant layer exposed; and
- (e) a layer of in situ visible light transmissive ambient temperature attachable pressure sensitive adhesive to bond said laminate to window glass, wherein the total thickness of the laminate exceeds about 5 mils and the laminate exhibits a light transmittance.

2. (Previously presented) The laminate attached to window glass of claim 1 wherein each of said laminae has a thickness no greater than about 5 mils (0.13 mm).

3. (Previously presented) The laminate attached to window glass of claim 1 wherein each of said laminae is comprised of biaxially oriented polyester film.

4. (Previously presented) The laminate attached to window glass of claim 1 wherein said pressure sensitive adhesive is comprised of acrylic based copolymer.

5. (Previously presented) The laminate attached to window glass of claim 1 further including a third lamina comprised of visible light transmissive flexible non-adhesive polymeric material.



6. (Previously presented) The laminate attached to window glass of claim 1 wherein the scratch-resistant layer comprises a cured ceramer.

7. (Previously presented) The laminate attached to window glass of claim 1 wherein said window glass comprises tempered or laminated window glass, said laminate and window glass define a glazing element which passes the following ANSI Z-26 tests:

- 5.04 - Two Hour Boiling Water;
- 5.13 – Thirty Foot (9.14 m) Ball Drop;
- 5.17 – Resistance to Abrasion;
- 5.19 – Chemical Resistance; and
- 5.23 – Flammability.

8. (Previously presented) The laminate attached to window glass of claim 1 wherein said pressure sensitive adhesive layers are comprised of pressure sensitive adhesive having a shear storage modulus measured at 22°C in the range of about 0.20 Mpa to about 0.50 Mpa.

9. (Previously Presented) A vehicular or architectural glazing element which has reduced spall and lacerative consequences on impact fracture, said glazing element comprising:

(a) a laminate comprising a first lamina comprised of visible light transmissive flexible polymeric material having a first major surface and an opposite second major surface; a scratch-resistant layer over said first major surface; at least one additional lamina comprised of visible light transmissive flexible nonadhesive polymeric material; a sufficient number of layers of in situ visible light transmissive pressure sensitive adhesive layers to bond said laminae together with the scratch-resistant layer exposed; a layer of in situ visible light transmissive ambient temperature attachable pressure sensitive adhesive to bond said laminate to window glass; wherein the total thickness of the laminate exceeds about 5 mils and the laminate exhibits a light transmittance; and

(b) window glass.

10. (Original) The glazing element of claim 9 wherein said window glass is tempered.
11. (Original) The glazing element of claim 9 wherein said pressure sensitive adhesive layers are comprised of pressure sensitive adhesive having a shear storage modulus measured at 22°C in the range of about 0.20 MPa to about 0.50 MPa.
12. (Previously Presented) A laminate attached to window glass suitable for use in a vehicular or architectural glazing element comprising the following components adhered together in the following order:
  - (a) a scratch-resistant layer comprised of cured ceramer;
  - (b) a first biaxially oriented polyester film having a thickness of not more than 5 mils (0.13 mm);
  - (c) a first pressure sensitive adhesive layer;
  - (d) a second biaxially oriented polyester film having a thickness of not more than 5 mils (0.13 mm);
  - (e) a second pressure sensitive adhesive layer;
  - (f) a third biaxially oriented polyester film having a thickness of not more than 5 mils (0.13 mm); and
  - (g) a third ambient-temperature-attachable pressure sensitive adhesive layer;wherein said pressure sensitive adhesive layers are comprised of pressure sensitive adhesive having a shear storage modulus measured at 22°C in the range of about 0.20 MPa to 0.50 MPa.
13. (Previously presented) The laminate attached to window glass of claim 1, wherein each of said visible light transmissive pressure sensitive adhesive layers comprises an adhesive sufficient to maintain the laminae together through the ANSI Z-26 test: 5.04 – Two Hour Boiling Water.

14. (Previously presented) The laminate attached to window glass of claim 1, wherein said attachable pressure sensitive adhesive layer comprises an adhesive including a cross linker solution.
15. (Previously presented) The laminate attached to window glass of claim 1, wherein the laminate attached to the window glass has a percent haze less than or equal to about 2.0%.
16. (Previously presented) The laminate attached to window glass of claim 1, wherein the laminate attached to the window glass has a percent visible light transmission greater than or equal to about 88.6%.
17. (Previously presented) The laminate attached to window glass of claim 1, wherein the laminate attached to the window glass provides a glazing element which also passes each of the following ANSI Z-26 tests:
- 5.13 – Thirty Foot Ball (9.14 m) Drop;
  - 5.17 – Resistance to Abrasion;
  - 5.19 – Chemical Resistance; and
  - 5.23 – Flammability.
18. (Previously presented) The laminate attached to window glass of claim 1, wherein each of said visible light transmissive pressure sensitive adhesive layers comprises an adhesive sufficient to maintain the laminae together through the ANSI Z-26 test: 5.04 – Two Hour Boiling Water.
19. (Previously presented) The glazing element of claim 9, wherein it passes the ANSI Z-26 test: 5.04 – Two Hour Boiling Water.
20. (Previously presented) The glazing element of claim 19, wherein it also passes at least one of the following ANSI Z-26 tests:
- 5.13 – Thirty Foot Ball (9.14 m) Drop;

- 5.17 – Resistance to Abrasion;
- 5.19 – Chemical Resistance; and
- 5.23 – Flammability.

21. (Previously presented) The glazing element of claim 19, wherein it also passes each of the following ANSI Z-26 tests:

- 5.13 – Thirty Foot Ball (9.14 m) Drop;
- 5.17 – Resistance to Abrasion;
- 5.19 – Chemical Resistance; and
- 5.23 – Flammability.

22. (Previously presented) The glazing element of claim 9, wherein it has a percent haze less than or equal to about 2.0%.

23. (Previously presented) The glazing element of claim 9, wherein it has a percent visible light transmission greater than or equal to about 88.6%.

24. (Previously presented) A light transmissive laminate suited for attachment to window glass to provide a glazing element which has reduced spall and lacerative consequences on impact fracture of the window glass; said laminate comprising:

- (a) a first lamina comprised of visible light transmissive flexible nonadhesive polymeric material having a first major surface and an opposite second major surface;
- (b) a scratch-resistant layer over said first major surface to provide an exposed surface to the laminate;
- (c) at least one additional lamina comprised of visible light transmissive flexible nonadhesive polymeric material;
- (d) a sufficient number of layers of in situ visible light transmissive pressure sensitive adhesive layers to bond said laminae together with the scratch-resistant layer exposed;
- (e) a layer of in situ visible light transmissive ambient temperature attachable pressure sensitive adhesive to bond said laminate to window glass; and

wherein the total thickness of the laminate exceeds about 5 mils, the laminate exhibits a light transmittance of at least about 75% and said pressure sensitive adhesive layers are comprised of pressure sensitive adhesive having a shear storage modulus measured at 22°C in the range of about 0.20 Mpa to about 0.50 MPa.

25. (Previously presented) The laminate of claim 24, wherein once attached to window glass has a percent haze less than or equal to about 2.0%.

26. (Previously presented) The laminate of claim 24, wherein it exhibits a light transmittance of at least about 85%.

27. (Previously presented) The laminate of claim 24, wherein said attachable pressure sensitive adhesive layer comprises an adhesive including a cross linker solution.

28. (Canceled)

29. (Canceled)

30. (Previously presented) The laminate of claim 12, wherein the laminate comprises an optically clear laminate.

31. (Previously presented) The laminate attached to window glass of claim 1, wherein said scratch-resistant layer comprises a scratch-resistant hard coating.

32. (Previously presented) The laminate attached to window glass of claim 1, wherein said pressure sensitive adhesive layers directly bond said laminae together.

33. (Previously presented) The glazing element of claim 9, wherein said pressure sensitive adhesive layers directly bond said laminae together.

34. (Previously presented) The laminate of claim 24, wherein said pressure sensitive adhesive layers directly bond said laminae together.
35. (Previously presented) The glazing element of claim 9, wherein said attachable pressure sensitive adhesive comprises a cross linker solution.
36. (Previously presented) The laminate attached to window glass of claim 1, wherein the laminate exhibits a light transmittance of at least about 75%.
37. (Previously presented) A glazing element as set forth in claim 9, wherein the laminate exhibits a light transmittance of at least about 75%.
38. (Previously presented) A laminate attached to window glass as set forth in claim 1, wherein said first lamina is comprised of optically clear flexible nonadhesive polymeric material, said at least one additional lamina is comprised of optically clear flexible nonadhesive polymeric material, said sufficient number of layers of in situ adhesive layers comprise optically clear pressure sensitive adhesive layers, and said layer of in situ ambient temperature attachable pressure sensitive adhesive comprises an optically clear ambient temperature attachable pressure sensitive adhesive.
39. (Previously presented) A glazing element as set forth in claim 9, wherein said first lamina is comprised of optically clear flexible polymeric material, said at least one additional lamina is comprised of optically clear flexible polymeric material, said sufficient number of layers of in situ adhesive layers comprise optically clear pressure sensitive adhesive layers, and said layer of in situ ambient temperature attachable pressure sensitive adhesive comprises an optically clear ambient temperature attachable pressure sensitive adhesive.
40. (Previously presented) A light transmissive laminate as set forth in claim 24, wherein said first lamina is comprised of optically clear flexible nonadhesive polymeric material, said at least

one additional lamina is comprised of optically clear flexible nonadhesive polymeric material, said sufficient number of layers of in situ adhesive layers comprise optically clear pressure sensitive adhesive layers, and said layer of in situ ambient temperature attachable pressure sensitive adhesive comprises an optically clear ambient temperature attachable pressure sensitive adhesive.

41. (Previously Presented) A vehicular or architectural glazing element comprising the laminate attached to window glass of claim 1.

42. (Previously Presented) A vehicular or architectural glazing element comprising the laminate attached to window glass of claim 12.

9. *Appendix II – Decision on Appeal*





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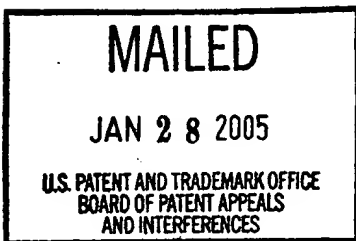
The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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FEB 04 2005

Harold C. Knecht III  
OFFICE OF INTELLECTUAL  
PROPERTY COUNSEL  
3M INNOVATIVE PROPERTIES COMPANY



Ex parte PETER T. DIETZ

JAN 31 2005

Appeal No. 2005-0244  
Application No. 09/591,584

REFERRED TO

ON BRIEF

HCIC - SK

Before WALTZ, DELMENDO, and PAWLIKOWSKI, Administrative Patent Judges.

WALTZ, Administrative Patent Judge.

3/28/05  
DUE DATE(S)  
ATTORNEY  
DOCKETED

DECISION ON APPEAL

This is a decision on an appeal from the primary examiner's final rejection of claims 1-11, 13-15, 17-22, 31-33, 35, 38 and 39. The remaining claims pending in this application are claims 12, 16, 23-30, 34, 36, 37 and 40. Claims 12, 16, 23, 30, 36 and 37 are allowed, as are claims 24-27, 34 and 40, and claims 28 and 29 are objected to as allowable but depending upon a rejected base claim (final Office action dated Oct. 27, 2003, pages 4-5; Brief, pages 1-2 and 4; and the Advisory Action dated Feb. 17, 2004). We have jurisdiction pursuant to 35 U.S.C. § 134.

According to appellant, the invention is directed to a laminate attached to window glass to provide a glazing element with reduced spall and lacerative consequences upon impact fracture of the window glass (Brief, page 2). A further understanding of the invention may be gleaned from illustrative independent claim 1 as reproduced below:

1. A laminate attached to window glass to provide a glazing element which has reduced spall and lacerative consequences on impact fracture of the window glass; said laminate comprising:

(a) a first lamina comprised of visible light transmissive flexible nonadhesive polymeric material having a first major surface and an opposite second major surface;

(b) a scratch-resistant layer over said first major surface to provide an exposed surface to the laminate;

(c) at least one additional lamina comprised of visible light transmissive flexible nonadhesive polymeric material;

(d) a sufficient number of layers in situ visible light transmissive pressure sensitive adhesive layers to bond said laminae together with the scratch-resistant layer exposed; and

(e) a layer of in situ visible light transmissive ambient temperature attachable pressure sensitive adhesive to bond said laminate to window glass, wherein the total thickness of the laminate exceeds about 5 mils and the laminate exhibits a light transmittance.

Appellant states that the claims do not stand or fall together "as a whole," listing seven groups of claims (Brief, page 4). To the extent appellants provide specific, substantive arguments for the patentability of any individual claims,

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we will consider these claims separately. See 37 CFR  
§ 1.192(c)(7)(2003); *In re McDaniel*, 293 F.3d 1379, 1383,  
63 USPQ2d 1462, 1465 (Fed. Cir. 2002).

The examiner relies upon the following references as  
evidence of obviousness:

Murphy	4,157,417	Jun. 05, 1979
Hutchison	5,118,540	Jun. 02, 1992
Bilkadi et al. (Bilkadi)	5,677,050	Oct. 14, 1997
Yang et al. (Yang)	6,013,722	Jan. 11, 2000
Tanaka et al. (Tanaka)	6,033,785	Mar. 07, 2000

The following rejections are before this merits panel in  
this appeal:

(1) claims 1-5, 7-9, 11, 13, 17-21, 31-33, 38 and 39 stand  
rejected under 35 U.S.C. § 103(a) as unpatentable over Hutchison  
in view of Murphy (Answer, page 3);

(2) claim 10 stands rejected under section 103(a) over the  
references applied in rejection (1) further in view of Tanaka  
(Answer, page 5);

(3) claim 6 stands rejected under section 103(a) over the  
references applied in rejection (1) further in view of Bilkadi  
(Answer, page 5); and

(4) claims 14, 15, 22 and 35 stand rejected under section  
103(a) over the references applied in rejection (1) further in  
view of Yang (Answer, page 6).

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Based on the record as a whole, we *affirm* all of the rejections on appeal essentially for the reasons stated in the Answer and those reasons set forth below.

#### OPINION

##### A. *Rejection (1)*

The examiner finds that Hutchison discloses a reflective film mounted on a substrate where the film is constructed of a protective outer fluorocarbon film, a first layer of pressure sensitive adhesive (PSA), a silver layer, a biaxially oriented polyethylene terephthalate (PET) layer, a second layer of a PSA, a biaxially oriented PET layer, and a third layer of PSA, mounted on a support structure (Answer, page 3). The examiner further finds that Hutchison teaches that the reflective film is suitable for solar energy applications but does not disclose that the reflective film is attached to window glass (Answer, page 4). Therefore the examiner applies Murphy for the teaching of a similar reflective film attached to window glass to reduce the heat and glare of solar radiation (*id.*). From these findings, the examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of appellant's invention to employ the reflective film disclosed by Hutchison with the window

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glass as taught by Murphy for the advantages of reduced heat and glare from solar radiation (*id.*).

Appellant argues that nowhere does Hutchison disclose, teach or suggest using his film in combination with window glass (Brief, page 5; Reply Brief, page 2). This argument is not persuasive. We note that Hutchison teaches the application of his film to "a flat, curved, and/or angular surface 214 of a support structure 210" (sentence bridging cols. 6-7), used in solar energy "applications," and this disclosure of "support structure" may be considered as generic to window glass (abstract; col. 1, ll. 18-19; Figure 7; and col. 7, ll. 41-46). Furthermore, we note that Murphy has been applied by the examiner to show the obviousness of combining the Hutchison film with window glass.

Appellant argues that there is no motivation or suggestion to combine Hutchison and Murphy since the films of these references have "diametrically opposed functions," namely the film of Hutchison functions to reflect visible light in addition to ultraviolet and infra-red while the Murphy film functions to transmit visible light while reducing ultraviolet light, infrared light and glare (Brief, page 6; Reply Brief, pages 4-5).

This argument is also not persuasive. As noted by the examiner (Answer, page 7), the solar control film of Hutchison is very similar in construction and materials to the solar control film set forth by Murphy.<sup>1</sup> Furthermore, we determine that the functions of these similar solar control films are not "diametrically opposed" but are very much alike. Hutchison teaches that "[t]o be efficient a reflective film must be highly specularly reflective to visible, ultraviolet, and/or near infrared light between about 300-2,500 nanometers" (col. 1, ll. 19-22). Although Hutchison teaches that some uv light will be transmitted by the thin layer of silver (col. 2, ll. 14-20), this reference also teaches that "[s]ilver reflects visible light better than aluminum" (col. 1, ll. 52-53). Therefore the teaching in Murphy that visible light is somewhat transmitted by the aluminum layer (col. 5, ll. 25-27) is not a "diametrically opposed function" but would have been suggested to one of ordinary skill in this art by the teachings of Hutchison. We note that Murphy teaches that the transmission of visible light, even with a thin aluminum layer, may be reduced by up to 90%

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<sup>1</sup>We note that Hutchison teaches the advantages of a silver metal layer over that of aluminum (col. 1, ll. 52-53; col. 2, ll. 14-20) while Murphy employs an aluminum layer but teaches that silver may be used (col. 1, ll. 36-54).

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(col. 1, ll. 44-49; note that other metals such as silver are taught by Murphy at col. 1, ll. 49-54).

Appellant argues that Hutchison does not disclose, teach or suggest that one of his laminates is capable of passing the tests as required in claims 7, 13, and 17-21 (Brief, page 7; Reply Brief, page 7). This argument is not persuasive. The examiner has established a reasonable belief that the laminate of Hutchison will have the same or substantially the same properties as the claimed laminate, due to the similar materials and construction of layers (Answer, pages 8-9). Accordingly, the burden of proof has been shifted to appellant to prove that the laminates of the prior art do not have the properties set forth in the claims on appeal. See *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990); see also *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Appellant argues that Hutchison does not disclose, teach or suggest that his acrylic PSA possesses a shear storage modulus falling within the limitations of claims 8 and 11 (Brief, pages 7-8; Reply Brief, pages 7-8). This argument is not well taken since Hutchison discloses that the acrylic PSA is, *inter alia*, "chosen based on its bonding properties" (col. 8, ll. 2-5). Accordingly, the determination of the optimum properties of the

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acrylic pressure-sensitive adhesive would have been well within the ordinary skill of one in this art. See *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

For the foregoing reasons and those set forth in the Answer, we determine that the examiner has established a *prima facie* case of obviousness in view of the reference evidence. Based on the totality of the record, including due consideration of appellant's arguments, we determine that the preponderance of evidence weighs most heavily in favor of obviousness within the meaning of section 103(a). Therefore we affirm the rejection of claims 1-5, 7-9, 11, 13, 17-21, 31-33, 38 and 39 under section 103(a) over Hutchison in view of Murphy.

*B. Rejections (2), (3) and (4)*

In each of the above rejections, the examiner relies on Hutchison and Murphy, as discussed above, with the additional citation of Bilkadi against claim 6, Tanaka against claim 10, and Yang against claims 14, 15, 22 and 25 (Answer, pages 5-7). We adopt the examiner's findings from the Answer and as discussed above.

Appellant argues that Bilkadi does not suggest forming the claimed laminate in combination with window glass, nor is there any motivation or suggestion in this reference to combine the



teachings of Hutchison and Murphy (Brief, page 8). These arguments are not well taken since Bilkadi is not relied upon to teach the claimed laminate but only as evidence of other well known scratch-resistant coatings that work well with acrylic adhesives (Answer, page 6). The motivation to combine Hutchison and Murphy has previously been stated by the examiner (Answer, page 4).

Appellant argues that Tanaka "does not correct for the deficiencies of the combination of Hutchison and Murphy" (Brief, page 8). We rely upon our comments concerning Hutchison and Murphy discussed above and in the Answer.

Appellant argues that Yang does not provide any motivation or suggestion for combining the teachings of Hutchison and Murphy (Brief, page 9). Appellant further argues that Yang does not disclose a laminate of at least two polymeric material laminae bonded together where the laminate and window glass have a percent haze less than or equal to about 2.0% (*id.*). These arguments are not well taken. As discussed above, the examiner has established a proper motivation or suggestion to combine the teachings of Hutchison and Murphy (Answer, page 4). As correctly found by the examiner (Answer, page 6), Yang teaches that post-additive crosslinking agents added to an acrylate pressure-

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sensitive adhesive produce adhesives with low haze, a desired feature in optical articles (Yang, abstract; col. 2, ll. 58-67; and col. 3, l. 66-col. 4, l. 11). Therefore the examiner has established that it would have been reasonable to one of ordinary skill in the art to add the crosslinkers taught by Yang for acrylate pressure-sensitive adhesives to the similar acrylic PSA of Hutchison to lower haze in the laminate. The optimum amount of additive would have been well within the ordinary skill in the art. *See In re Woodruff, supra.*

For the foregoing reasons and those stated in the Answer, we determine that the examiner has established a *prima facie* case of obviousness in view of the reference evidence in rejections (2), (3) and (4) as set forth above. Based on the totality of the record, including due consideration of appellant's arguments, we determine that the preponderance of the evidence weighs most heavily in favor of obviousness within the meaning of section 103(a). Accordingly, we affirm rejections (2), (3) and (4) as set forth above.

C. *Summary*

The rejection of claims 1-5, 7-9, 11, 13, 17-21, 31-33, 38 and 39 under section 103(a) over Hutchison in view of Murphy is affirmed. The rejection of claim 10 under section 103(a) over

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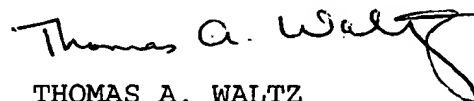
Hutchison in view of Murphy and Tanaka is affirmed. The rejection of claim 6 under section 103(a) over Hutchison in view of Murphy and Bilkadi is affirmed. The rejection of claims 14, 15, 22 and 35 under section 103(a) over Hutchison in view of Murphy and Yang is affirmed.

The decision of the examiner is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

**AFFIRMED**

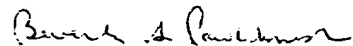


THOMAS A. WALTZ )  
Administrative Patent Judge )



ROMULO H. DELMENDO )  
Administrative Patent Judge )

BOARD OF PATENT  
APPEALS  
AND  
INTERFERENCES



BEVERLY A. PAWLIKOWSKI )  
Administrative Patent Judge )

TAW/jrg

Appeal No. 2005-0244  
Application No. 09/591,584

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